

## REMARKS

Claims 1-20 are pending in the present application. Reconsideration of the claims is respectfully requested.

### **I. 35 U.S.C. § 102, Alleged Anticipation, Claims 1-8, 19 and 20**

The Office Action rejects claims 1-8, 19 and 20 under 35 U.S.C. § 102(e) as being allegedly anticipated by Al-Kazily (U.S. Publication No. 2002/0111874 A1). This rejection is respectfully traversed.

As evidenced by the attached declarations under 37 CFR § 1.131 and the accompanying exhibits of records, the present invention was invented prior to the effective date of the Al-Kazily reference. The disclosure, Exhibit A, is shown by Exhibit B as being last modified date of February 5, 2001. The disclosure details the invention recited in at least independent claim 1 was conceived before the effective date of the patent to Al-Kazily. 35 U.S.C. 102(e) reads as follows:

A person shall be entitled to a patent unless -

(e) the invention was described in - (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The patent to Al-Kazily was not filed in the United States before **the invention by the applicant**. Al-Kazily also does not qualify as prior art under any other section of 35 U.S.C. 102 and, thus, does not constitute a statutory bar. Since the instant patent application was filed within six months from the date of the Invention Disclosure and the Invention Disclosure, as well as the application itself, were in a state of draft or review during those six months, diligence is clear. Therefore, Applicants respectfully request withdrawal of the rejection of claims 1-8, 19 and 20 based upon Al-Kazily.

**II. 35 U.S.C. § 103, Alleged Obviousness, Claims 9-14 and 16-18**

The Office Action rejects claims 9-14 and 16-18 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Al-Kazily (U.S. Publication No. 2002/0111874 A1) in view of Kansal (U.S. Patent No. 6,647,374 B2). This rejection is respectfully traversed.

Claims 9-14 and 16-18 are dependent on independent claim 1 and, thus, these claims distinguish over the combination of Al-Kazily and Kansal for at least the reasons noted above with regard to claim 1. That is, the present application predates the applied Al-Kazily reference. As such, the rejection is improper and should be withdrawn.

**III. 35 U.S.C. § 103, Alleged Obviousness, Claim 15**

The Office Action rejects claim 15 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Al-Kazily (U.S. Publication No. 2002/0111874 A1) in view of Kansal (U.S. Patent No. 6,647,374 B2) and further in view of Official Notice. This rejection is respectfully traversed.

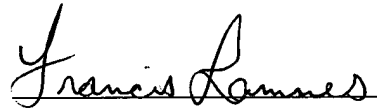
Claim 15 is dependent on independent claim 1 and, thus, this claim distinguishes over the combination of Al-Kazily, Kansal and the Official Notice for at least the reasons noted above with regard to claim 1. That is, the present application predates the applied Al-Kazily reference. As such, the rejection is improper and should be withdrawn.

#### IV. Conclusion

It is respectfully urged that the subject application is patentable over the prior art of record and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: December 14, 2004

Respectfully submitted,



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# Exhibit B

AutomatedBusiness-dates.txt

c:/Documents and Settings/Administrator/My  
Documents/work/patents/filed/AutomatedSelling:

total 503 free 58719696

-rw-rw-rw-	1	jehanson	root	9490	Apr	27	2001	#AutomatedBusiness-04.txt#
drwxrwxrwx	2	jehanson	root	0	Mar	30	2004	.
drwxrwxrwx	2	jehanson	root	0	Mar	30	2004	..
-rw-rw-rw-	1	jehanson	root	4717	Jan	23	2001	AutomatedBusiness-01.txt
-rw-rw-rw-	1	jehanson	root	6124	Jan	29	2001	<del>AutomatedBusiness-02.txt</del>
-rw-rw-rw-	1	jehanson	root	9715	Feb	5	2001	AutomatedBusiness-03.txt
-rw-rw-rw-	1	jehanson	root	9678	Mar	7	2001	<del>AutomatedBusiness-04.txt</del>
-rw-rw-rw-	1	jehanson	root	9679	Mar	7	2001	AutomatedBusiness-04.txt~
-rw-rw-rw-	1	jehanson	root	6815	Feb	23	2001	MiscNotes.txt
-rw-rw-rw-	1	jehanson	root	173620	Jun	22	2001	YOR920010349 First Draft.lwp
-rw-rw-rw-	1	jehanson	root	284369	Jun	22	2001	YOR920010349US1 Figures.tif

# Exhibit A

AutomatedBusiness-03.txt

Disclosure YOR8-2000-0648

## TITLE:

Method for Making Operational Business Decisions Automatically

## INVENTORS:

Steve R White  
Jeff Kephart  
James E Hanson  
Rajarshi Das

## BACKGROUND:

As more business relationships are conducted over the Internet, it will become easier for firms to move to variable, and then dynamic pricing of their goods and services. The same is true of bundling and other configurable product attributes. In a competitive setting where price, bundling, or another configurable product attribute is a dominant competitive dimension, more revenue will flow to the firm that can offer the most competitive price (bundle, etc.) at any given time. Since firms offering similar products or services are competing against each other, the firm that can move rapidly set its price (bundle, etc.) to a competitive level will increase its revenue.

>JEH 02/05:

>The same is true of firms' relationships with suppliers. Buying decisions will be increasingly automated, including negotiation, selection of partners, entering into contracts, etc., etc., etc.

This means that firms will have to be able to determine and set competitive prices (bundles, etc.) more quickly than humans are capable of doing. Thus firms will need to automate the process of setting or negotiating prices (bundles, etc.) By doing so, firms gain an advantage over competitors by being able to react more quickly in an economic environment in which these attributes are both dynamic and rapidly varying.

The same is true in situations where the price and other product attributes may be negotiated, such as in one-on-one negotiations with prospective buyers or in an auction, or etc. In such a situation, the firm that automates its negotiation strategy will be able to react faster and more efficiently to market conditions, other bids, etc., than its competition, and thereby increase its revenues.

## SUMMARY:

This is a method of running a firm in such a way that operational business decisions (e.g. pricing and bundling of goods and services, placement of offers or bids, etc.) are made automatically. We call such firms "digital firms".

We suppose that the firm offers some selection of products (goods and/or services) to customers over the Internet, such as via a Web storefront for human customers or via some standard protocol (e.g. XML & SOAP) for other digital firms. In doing so, it provides online information about the prices, bundles, and other attributes of its products.

### AutomatedBusiness-03.txt

In this method, the people that run the firm set strategic policies for the firm. For example, they determine ranges of prices, the strategy for competing against other firms, etc. Automated algorithms then carry out those strategies on a second-by-second or trade-by-trade basis. For example, if the firm assigns non-negotiable prices (bundles, etc.) to its products, the algorithms set those prices (bundles, etc.) within the constraints imposed by the strategic policies. If prices (bundles, etc.) are negotiated, the algorithms implement a given negotiation strategy.

In addition to constraints imposed by the human operators, these algorithms use as inputs any or all of the information available to the firm, such as production costs of the goods, published prices of competitors' goods/services, current or past sales and income on different products, estimates or historical measures of customer demand, etc. This information is available in computer-readable form, and is kept as up-to-date as possible by automated means (e.g., automated tracking of orders).

For example, the price-setting algorithms described in "Dynamic Pricing by Software Agents" (Kephart, Hanson and Greenwald, Computer Networks, 2000) uses the revenue a firm makes from the sale of a particular good to adjust the price of that good. Other techniques for forecasting prices in a competitive manner are covered in the related invention disclosure "Automated pricing strategy for software agents in information-limited environments" (Kephart and Das, Disclosure #SOMB-2000-0004). or if the goods are sold in through a double auction, the algorithms described in "Agent-Human Interactions in the Continuous Double Auction" (Das, Hanson, Kephart, and Tesauero, submitted to proceedings of IJCAI, 2001) might be employed. Or if the goods are sold through an English auction (such as offered by eBay), the algorithms might determine the starting price and reserve price. Similarly, a firm might offer its products in bundles calculated to maximize revenue. Various embodiments of this invention may employ these techniques or others. The details of the algorithms used are not really important here. Any number of other possibilities may be imagined.

As an simple illustration of the idea, suppose a firm offers products A, B, and C over the Web, using non-negotiable pricing bundling. The firm would have these interconnected components:

1. A browseable online catalog identifying and describing the products and prices for each and/or for the available bundles (e.g. A&B together, etc.) This is available to customers, e.g., on the firm's web server.
2. An automated "shopping cart" whereby customers make purchases online. This is also available, e.g., on the web server, and is integrated with the online catalog (#1).
3. Automated tracking of relevant sales, market & other conditions. The following examples (#3a, 3b, and 3c) represent just three possibilities; others may be easily imagined.
  - 3a. Automated tracking of the revenue from sales of each of the products and bundles. This receives data from the shopping cart (#2).
  - 3b. Automated tracking of the prices offered by known competitors, e.g., by screen-scraping competitors' websites, on products comparable to those in the online catalog (#1).

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- 3c. Automated tracking of production costs, etc., related to the products in the online catalog (#1).
- 3d. View consumers' clickstreams
- 4. Automated price/bundle/attribute determination. This gathers data from the whichever tracking components (#3) are available, determines the prices and bundles to be offered, and publishes them in the online catalog (#1).
- 5. Relationships with suppliers.

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CLAIM-ishness

CLAIM 1. A method of doing business in which operational business decisions are made automatically based upon current market conditions, prior history and projected future conditions.

- 2. #1, where the decisions have to do with pricing
- 3. #1, where the decisions have to do with purchasing
- 4. #1, where the decisions have to do with participation in auctions for sales
- 5. #1, where the decisions have to do with participation in auctions for procurement

[etc., etc., etc.]

. . . . .

- 101. #2, where the pricing is posted pricing
  - 102. #2, where the pricing is negotiated
- [etc., etc., etc.]

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Jeff: prior art about Kasbah.  
SRW sent copy to GZ

Jeff suggests cutting this up into multi-patents, separating out:  
--posted pricing  
--auctions  
--etc.

I.e., cut off that big claim 1 above, and instead submit separate patent for the different subsidiary things.

GZ likes that idea.

Either separate buy side from sell side in 2 patents; or separate different mechanisms (posted vs. auction...) and cover both sides in 1 patent.

Raja: buy side things?

Jeff: bundling decisions.

Steve: human sets params of tradeoff btw. urgency vs. cheapness.

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Jim: the core is integrating & hooking up everything into an automated business, not the specific techniques.

GZ concerned about the prior art. Gotta do a search for prior art here.

Steve: how do we specify the parameters of the search, so that we don't get petabytes of junk?

So maybe tailor search by laying out the specific areas we're having to automate.

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TO DO:

--Draft all the claims & claim trees we can think of.

--Then, send out for SEARCH.

--JEH: lay out flow diag's for the specific cases of:

    sales using posted pricing

    sales using . . . . .

    procurement using . . . . .

--SRW: "where we want to generalize to, what the spokes are..."

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One way to cover the space:

1. patent to cover automated selling,
2. patent to cover automated purchasing

#1, Claim 1. A method of doing business, consisting of:

--an online catalog or other description of products for sale, available for browsing or searching by customers

--a means whereby customers may order or negotiate online.

--(optionally) a means of identifying and contacting potential customers.

--a means of automatically making operational decisions relating to sales (e.g., pricing/bundling, negotiation) based upon prior history, current conditions, and projected future conditions.

#2, Claim 1. A method of doing business consisting of:

--online purchasing: select supplier(s), search or browse catalog or other desc. of products for sale, support for ordering or negotiating

--automated decision-making for purchasing, e.g., accept/reject, counteroffer.

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Another way:

1. patent to cover automated transactions & decision-making involving posted, non-negotiable pricing.
2. patent to cover automated transactions & decision-making involving negotiable pricing.